

DIGITAL PRESSURE SWITCH

— MANUAL

1. NOTICE

1. Please check the packaging and appearance after you received the product.
2. Please check the mode and specification of the product. Keep correct electrical connection and mounting method.
3. Please installation WITHOUT power.
4. During using, please notice the technical and operation conditions: the temperature of medium, burst pressure, power supply.
5. This product is a precision device, DO NOT use hard objects to touch the diaphragm or disassemble.
6. During installation, do not install or disassemble strongly, especially the installation of thread.
7. Please install or disassemble with a suitable wrench, Otherwise, the damage is not in the scope of warranty.
8. After starting the gauge, it is a normal phenomenon to take a few minutes to keep it stable and work normally.
9. If the product is out of order, please contact our after-sale technical staff.
10. During installation, the gauge will be affected by installation stress. After installation, please zero clearing.

(!)The product damage caused by non-professional operation according to the operation regulation is not the scope by the warranty.

2. WARNING

1. When operation temperature is above 60 degree, please use forced fans or cooling machines, but do not let the cooling air blow to the switch directly.
2. For the switch powered by 220VAC/380VAC, in order to avoid user access to power terminals and other high voltage parts, Please take necessary measures on the final equipment.
3. The installation, commissioning and maintenance of this product shall be conducted by qualified engineers or technicians member.
4. If the malfunction or exception of this product is likely to result in a major system accident, please set up an appropriate protective circuit outside to prevent accidents.
5. The company does not undertake any direct or indirect loss other than the product itself.
6. The company reserves the right to change the manual of the product without notice.

3. DESCRIPTION

This is an intelligent digital pressure switch, setting pressure measurement, pressure display, control in one professional unit. It can be set two group independent NO/NC alarm points. It achieves low pressure to start, high pressure to stop; high pressure to start, low pressure to stop. Auxiliary functions available: alarm methods, password protection, alarm delay, error correction, sampling frequency adjustable.

This series of products use high-speed MCU acquiring and processing data. It can be widely used and automated production line monitoring, pressure vessels, environmental monitoring and other conditions.

- High accuracy class: 0.5%Fs or 0.25%Fs available
- Widely temperature range compensation: -25~85 °C
- Two group independent NO/NC alarm points setting
- Different units switchable/zero clearing
- Delay control/password protection/error correction
- Sampling frequency adjustable
- Restore factory settings
- 304 Stainless steel shell, IP65

4. SPECIFICATIONS

Range : - 0.1 ~ 0.1...1...250Mpa

-100-60...-10 ~ 1...10...100Kpa
0~1...2.5...5.10...25...50Kpa

Overload Capacity: Range*2 (<10Mpa)

Range*1.5 (>10Mpa)

Power : 24VDC/110VAC/220VAC/380VAC available

Acc. : ±0.5%FS ±0.25%FS

Alarm Point: Any point within the pressure range.

Relay Capacity:

The first group: 220VAC 5A, 24VDC 5A

The second group: 220VAC 3A, 24VDC 3A

Compensation Temperature: 0~65°C

Operation Temperature : -25°C~85°C

Protection Class: Ip65

Response Rate: The fastest 8 times/second

Screw : M20*1.5 or customized

Connector Material: 304 Stainless Steel

Shell Material: 304 Stainless Steel

Measure Medium: non-corrosive with 304 stainless steel

Outline: Waterproof insertion, Straight

Accessory: Waterproof insertion (0.75m)

Certificates: CE,

Ex(ExibII BT4)(24VDC)

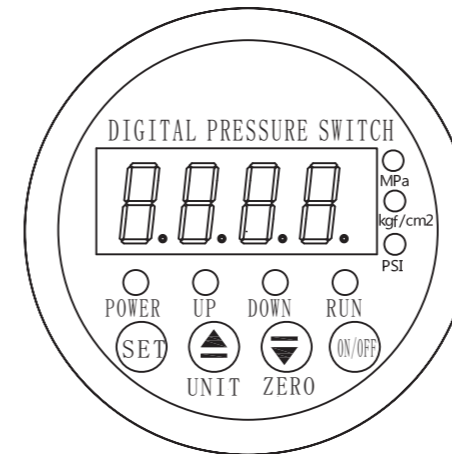
Circuit Protection:

- Power isolation,
- Output isolation,
- Power reverse protection,
- Anti electromagnetic interference Design

Function:

- Pressure units switchable
- Zero clearing
- Password protection
- Display digit optional
- Sampling frequency optional
- Restore factory settings

5. BUTTON



BUTTON	NAME	DESCRIPTION
	SETTING BUTTON	Short press show alarm point and hysteresis; long press for 2 seconds to enter system function setting.
	INCREASE BUTTON	In standby state: long press 3 seconds to switch the pressure units; In setting state: press to increase the figure.
	DECREASE BUTTON	In standby state: long press to zero clearing(error clearing); In setting state: press to decrease the figure.
	RUN BUTTON	Press it to switch states between working state and standby state. When the run light always on, it means the working state; when the light off, it means standby state.

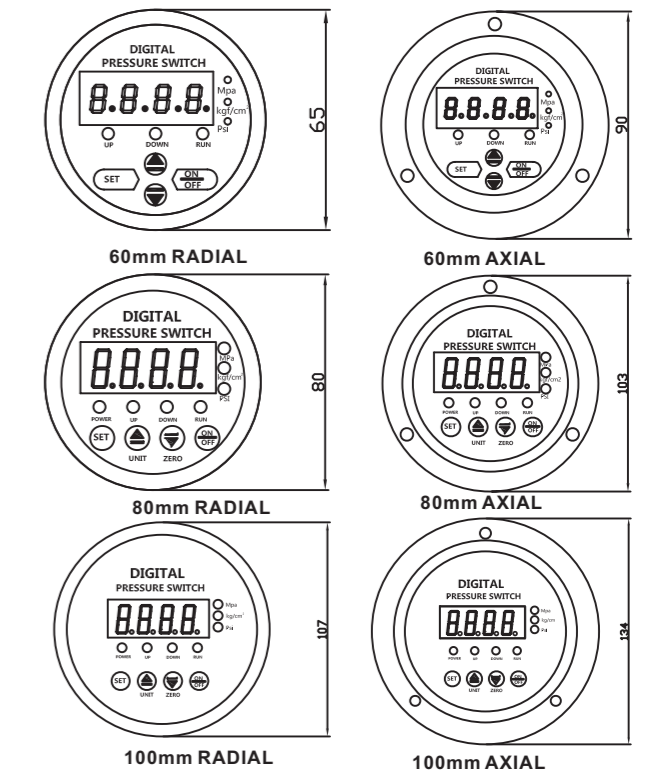
5.2. BUTTON DESCRIPTION

INDICATOR LIGHT	DESCRIPTION
POWER	Light on, it means product electrify.
UP	In setting state, light on, it means to set AL alarm; In working state, light on, it means the AL working state.
DOWN	In setting state, light on, it means to set AH alarm; In working state, light on, it means the AH working state.
RUN	Light on, it means to enter working state; Light off, it means to enter standby state. ***When the light on, the switch can not be operated.
UNITS	Light on, it means the pressure unit you are using.

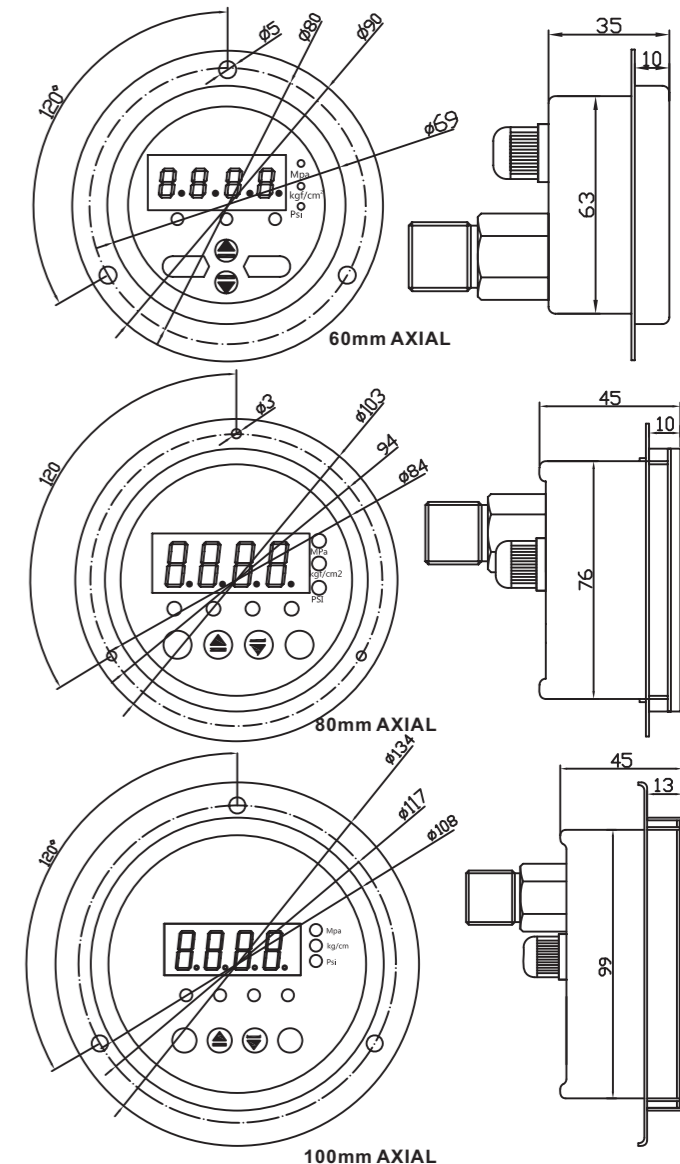
5.3. STATES DESCRIPTION

STATE	DESCRIPTION
Working State	Run light on, enter working state.
Standby State	Run light off, enter standby state. Then short press 'SET' button to enter SPECIFICATION SETTING; long press 'SET' button for 2 seconds to enter SYSTEM SETTING.
Setting State	SPECIFICATION SETTING refer to Part 7. SYSTEM SETTING refer to Part 9.

6. SIZE




6.2 MONTING SIZE



7. SPECIFICATION SETTING

7.1. ZERO CLEARING

In standby state, long press  button for 4 seconds, it will collect the current pressure as its zero.









***NOTICE: Zero clearing MUST without pressure.

7.2. PRESSURE UNITS SWITCH

In standby state, long press  button for 3 seconds, it will switch the pressure unit cyclically.

7.3. ALARM POINT AND HYSTERESIS SETTING

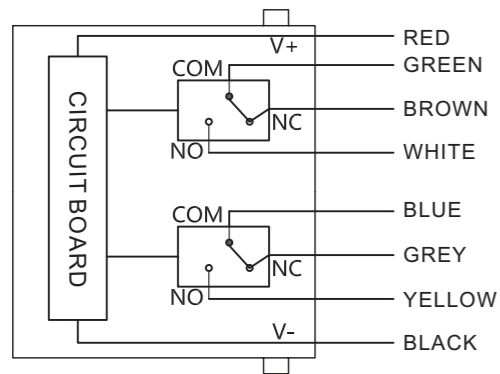
In standby state, short press  button to enter alarm point and hysteresis setting.

CODE	NAME	OPERATION	DEFAULT
AL	The first group relay alarm	The screen flicker, the UP light on, change the figure through  and  button, then press 'SET' button to save and enter next specification setting.	LL alarm
AH	The second group relay alarm	The screen flicker, the DOWN light on, change the figure through  and  button, then press 'SET' button to save and enter next specification setting.	HH alarm
Ad1	The first group relay hysteresis	The screen flicker, change the figure through  and  button, then press 'SET' button to save and enter next specification setting.	Default 0
Ad2	The second group relay hysteresis	The screen flicker, change the figure through  and  button, then press 'SET' button to save and quit.	Default 0

7.4. ALARM METHOD

CODE	NAME	DESCRIPTION
HH	High pressure point alarm	When current pressure > high pressure point, relay closed; When current pressure < (high pressure point - hysteresis), relay open.
LL	Low pressure point alarm	When current pressure < high pressure point, relay closed; When current pressure > (high pressure point + hysteresis), relay open. ***In LL alarm, short press 'ON/OFF' button, the relay will switch state.





































8. ELECTRICAL CIRCUIT



***NOTICE: The final definition of outline is based on the back label of the product.

9. SYSTEM SETTING

In setting state, long press 'SET' button for 2 seconds, it will show '----', then input password '0000' to enter system setting.
***('SET' button to shift,   button to change the figure)

CODE	NAME	FUNCTION	OPERATION	DEFAULT
P--1	Password	The function, it needs to input password before all the settings.	The default password is '1111', short press  or  button to switch P--1/P--0	P--1: closed. P--0: open.
AL01	The first group relay alarm	It is available to chose low pressure alarm or high pressure alarm.	When show 'AL01', short press  or  button to enter, then press  or  to switch state.	Default: LL
AL02	The second group relay alarm	It is available to chose low pressure alarm or high pressure alarm.	When show 'AL02', short press  or  button to enter, then press  or  to switch state.	Default: HH
dL-1	The first group relay alarm delay	The relay delay action	When show 'dL-1', short press  or  button to enter, then press  or  to switch state. 0 - 999 seconds available	Default: 0 means closed.
dL-2	The second group relay alarm delay	The relay delay action	When show 'dL-2', short press  or  button to enter, then press  or  to switch state. 0 - 999 seconds available	Default: 0 means closed.
E00	Error correct coefficient	Correct pressure error; The pressure after correcting = the pressure before correcting * E00	When show 'E00', short press  or  button to enter, then press  or  to switch state. 0.500-1.500 available	Default: 1.000
C--1	Reaction rate	1-20 available. The figure smaller, the reaction rate faster.	When show 'C--1', short press  or  button to enter, then press  or  to switch state.	Default: 6
blt	Display digit	Display digit can be chosen.	When show 'blt', short press  or  button to enter, then press  or  to switch state. 2~4 available. *some ranges without this function.	Default: 4
OP	Current output	when open, 4-20mA available.	Press  or  button to switch P--1/P--0. P--1: open; P--0: closed.	*** Customized
OE	Correct current error	Correct current error	When show 'OE', short press  or  button to enter, then press  or  to switch state. 0.500-1.500 available output current=OE*OP	*** Customized
	Restore factory setting	Default password '0123'	Input password, then press 'SET' button to finish.	

10. CODES

CODE	NAME	FUNCTION	SOLUTION
E--P	calibration system	The function is not open to customer.	Enter, please short press 'ON/OFF' button to quit.
----	password	when show '----', it need to input password.	'SET' button to shift, 'UP' and 'DOWN' button to change value.
E--H	overload	1. the pressure is over the range 2. the sensor damage	1. check pressure is over the range 2. check sensor
E--E	input abnormal	pressure sensor damage	1. Restore factory setting 2. Back to factory

11. PROBLEM AND SOLUTION

Q: QUESTION A: ANSWER S: SOLUTION

- Q: Relay not action
A: 1. The wiring error
2. the contactor damage
3. delay function open
S: 1. Check the wiring
2. Check AC contactor
3. Close the delay function
- Q: display without pressure
A: Installation stress
S: Zero Clearing
- Q: Digital no change
A: 1. The pressure range is not correct
2. pressure port blocking
3. Sensor damage
S: 1. Select correct range
2. Clear the pressure port
3. Returns to the factory repair
- Q: No relay action after a period time
A: 1. Action frequency, the relay damage
2. The power of motor large
S: 1. Add contactor
2. Reduce the action frequency
- Q: Power fail
A: 1. Wrong power supply
2. The circuit board damage
S: 1. Use proper power
2. Back to factory
- Q: Reaction delay
A: 1. Reaction rate slow
2. Buffer pipe too long
S: 1. Reduce C-1
2. Short the buffer pipe

10. AFTER-SALE SERVICE

The guarantee period of product begins from the data of delivery and lasts for 1year. During the guarantee period, if the product itself had quality problems, we would provide free maintenance, exchange and return service.

The content of specific quality guarantee:

1. The spare parts or components of the product are failure, but it can be operate normally after exchange. This is free to repair.

2. The spare parts or components of the product are failure, and it can't be repaired on time. We would exchange a new, same specification of qualified product.

3. The main functions of the product because of design or manufacture is not meet the requirement of the contract or the enterprise standard, the client need to return goods. We should recover the fault product and return the payment for the goods to the client.

***Disclaimer

During the guarantee period, the product failure caused by followed cases, it beyond the warranty:

1. The failure caused by the inappropriate use of product by user.

2. The client disassemble, repair, refit the product at own discretion